REMARKS/ARGUMENTS

As a result of this Amendment, claims 1-5 are under active consideration in the subject patent application.

In the Official Action, the Examiner has:

(1) objected to claims 1 and 2 for informalities under 37 CFR §1.75 and required correction;

(2) rejected claims 1-5 under 35 U.S.C. §112, second paragraph;

(3) rejected claims 1-5 under 35 U.S.C. §103(a) in view of a proposed combination of U.S. Publ. No. 20020162045, filed by Shiragaki (the "Shiragaki reference") and U.S. Publ. No. 20010046206, filed by Chan et al. (the "Chan reference");

(4) identified prior art made of record and not relied upon but considered pertinent to Applicant's disclosure.

With regard to Items 1 and 2, Applicant has amended claims 1-5 so as to address the various informalities identified by the examiner. Where appropriate, Applicant has adopted the suggestions of the examiner, with appreciation. Additionally, claim 1 has been amended so as to attend to the antecedents issue identified by the examiner. Claims 1-5 are definite and in conformance with US rules of practice. No new matter has been entered into the claims as a result of these changes. Accordingly, reconsideration and withdrawal of the objections under 37 CFR §1.75, and rejection under 35 U.S.C. §112, second paragraph, are respectfully requested.

With regard to Item 3, Applicant respectfully traverses the examiner's reliance upon a proposed combination of the Shiragaki and Chan references, and requests reconsideration for the following reasons. Applicant provides a method for protecting high layer service in multi-layer communication equipment. Applicant's method includes a low layer processing module that provides a high layer processing module with low layer transmission passage. The high layer processing module then extracts and inserts high layer service of the multi-layer communication equipment from low layer transmission passage. Significantly, this action is performed without changing the service between an upstream node and a downstream node after passing the high layer processing module of the multi-layer communication equipment. After the high layer processing module, Applicant's method detects whether the high layer processing module encountered a problem, and if so, it informs the low layer processing module. As a result, a bypass is set up, after the low layer processing module detects that the high layer processing module encountered trouble, so as to thereby isolate the high layer processing module from encountering the detected problem. This methodology, and the problem it seeks to correct is not found within the combined teachings of the Shiragaki and Chan references.

In order for a prima facie case of obviousness to be established, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, and the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2142 [emphasis added]. Neither the Shiragaki nor Chan references, whether taken alone or, in the

Examiner's proposed combination, teach or suggest all of the claim limitations presented by claims 1-5, as amended.

More particularly, at paragraphs 23 &25 of the Shiragaki reference suggest use of an NMS, that has been most often used for cases involved in multiple layers, applied as a method that coordinates multiple failure recovery areas in the network. Shiragaki's NMS has to perform failure recovery processing by referring to failure information, path usage rate information, etc., on all layers. As the load on MS increases, the size of the NMS device increases, and the cost rises. To solve the these disadvantages in the conventional method, Shiragaki provides a communication device and an automatic failure recovery process that allow omission of calculations related to layer optimality that calculate which layer is the best suited to perform failure recovery, and allow shortening of failure recovery time to be realized. In stark contrast, and as defined in claims 1-5, Applicant provides a method for protecting ATM traffic in MSPP as well for protecting other high layer service in multi-layer communication equipment. Applicant's method solves the problem in the art oft many nodes being needed to participate in the protection operation in a communication network.

The examiner appears to rely upon Shiragaki's disclosure for a suggestion of the first few steps of Applicant's claim 1. The examiner's characterization of the. Shiragaki reference is in error, since Shiragaki fails to disclose "after high layer processing module detecting the module encounters a problem, it will inform the low layer processing module" as recited in amended claim 1. Moreover, as taught at paragraphs 33, 171, and 172 of the Shiragaki reference, a layer failure detection and recovery processing unit and a layer failure detection and recovery processing unit are activated

simultaneously, but individually. The layer that first reaches failure recovery notifies the other layer that it has finished failure recovery to stop the failure recovery operation of the other layer. It can be seen that what one Shiragaki layer informs the other Shiragaki layer is that the one layer has finished failure recovery so as to stop the failure recovery operation of the other layer. Unlike Shiragaki, Applicant defines in amended claim 1 that the high layer processing module informs the low layer processing module is that the high layer processing module has encountered a problem. Shiragaki is silent as to this portion of Applicant's invention.

Additionally, the Shiragaki reference fails to disclose "*a bypass will be set up after low layer processing module detecting high layer processing module encountering the trouble, so as to isolate the high layer processing module encountering*." Referring to paragraphs 183-188 of Shiragaki, if layer B first reaches the condition before switching the main signal, layer B will send layer A a notice to inform layer A that layer B has reached the condition. After receiving the notice, layer A will stop the failure recovery operation and send layer B a switch authorization notice, and then layer B completes the failure recovery operation in the B layer. But, during the whole process, the step of bypass setting up is not mentioned. Applicant in contrast, defines a method such that when an ATM processing module of node b has troubles, the other ends of two disconnected SDH passages are directly connected by the SDH processing module, so that a bypass is set up by SDH at node b, and ATM traffic between node a and node c is thereby directly connected and is not affected. Therefore, as defined by step 4 of applicant's claim 1, the service between other nodes can not be affected by

setting up a bypass when one node encounters a trouble, and the technical effect can not be achieved by Shiragaki patent.

Turning to the Chan reference for the missing teaching from Shiragaki shows that Chan fails to disclose "*high layer processing module extract and insert high layer service of the node from low layer transmission passage, avoiding changing the service between upstream node and downstream node after passing high layer processing module of the said node*." Referring to paragraph 21 of Chan, VP is actually a virtual path between the nodes in a ring network. VP level protection is necessary for reliable transport of ATM traffic within a SONET network contemplated by Chan. In contrast, Applicant's method provides for ATM processing module extracts and inserts ATM traffic of the node which the ATM processing module is included in from SDH passage. ATM processing module of node b not only builds up normal connections between node a and node c but also sets up transparent connection for the ATM processing module's service of node a and node c. And, the service content of ATM traffic between node a and node c doesn't change. Claim 1 defines that the high layer processing module of a node sets up a connection between the services of an upstream node and a downstream node by extracting and inserting high layer service of the node from low layer transmission passage, that is a protection operation when the high layer processing module of the node has a fault. In contrast, Chan's VP is actually a virtual path between the nodes in the ring network, and is a protection for the whole network. Consequently, the teachings that are missing from Shiragaki are likewise missing from Chan.

In summary, Applicant submits that the unique method defined by claims 1-5, as amended, is not disclosed in the prior art references taken as a whole, and there is no teaching or suggestion in the references themselves or in the general knowledge of those skilled in this art to support their use in the particular combination relied upon by the Examiner. In the absence of such, the references are improperly combined. In any event, claims 1-5 define over any combination of Shiragaki and Chan.

With regard to Item 4, Applicants have considered the prior art references identified by the Examiner as pertinent and determined that none of them, taken alone, or in any valid combination with the Shiragaki and Chan et al. references anticipates or renders obvious the present invention.

In view of the foregoing, Applicant respectfully submit that claim 1-5 are in condition for allowance. Favorable reconsideration is therefore respectfully requested. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

If a telephone conference would be of assistance in advancing prosecution of the above-identified application, Applicants' undersigned Attorney invites the Examiner to telephone him at **215-979-1255**.

Respectfully Submitted,

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